IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

18. (currently amended) A catalyst body in an hydrogen reforming reactor with one or more layer elements with cavities which are etched and through which streamable media can flow ~~such as pores or channels~~, wherein pores or channels are formed by the etch process and wherein the cavities extend ~~are basically~~ perpendicular to the surface.

19. (currently amended) The catalyst body according to claim 18, wherein the layer elements advantageously consist of silicon or silicon compound alloy.

20. (currently amended) The catalyst body according to claim 18, wherein the cross sectional area ~~dimensions~~ of the cavities ~~perpendicular to the flow direction of the medium~~ can vary along their depth.

21. (currently amended) The catalyst body according to claim 18, wherein ~~the surface of the cavities has~~ one of the outside faces of the body which is perpendicular to the cavities carries a metallic coating with a high hydrogen permeability (e.g. Palladium).

22. (currently amended) The catalyst body according to claim 18, wherein the inner surface of the cavities (i.e. the inner walls of the etched cavities) ~~posses~~ carries a catalytic active coating.

23. (previously presented) The catalyst body according to claim 18, wherein at least two of the layer elements have alignment marks.

24. (currently amended) The catalyst body according to claim 18, wherein the layer elements ~~basically~~ consist of electrically conducting material.

25. (currently amended) A method of fabrication of a catalyst body of an hydrogen reforming reactor unit constructed from single layer elements which advantageously consist of a silicon substrate with the following procedure steps:

- depositing a thin metallic layer (typical thickness is around 1 micron) on one side of the catalyst body which has a high hydrogen permeability
- etching of complete pores running perpendicular to the layer surface through the substrate ~~which basically run perpendicular to the layer surface.~~
- depositing a catalytic active material at the inner walls of the etched pores
- stacking of equally processed and etched units (or segments, see claim 34) on top of each other making use of a pre-defined alignment structure,
- combining two of the so processed reactor units and aligning them oppositely to each other in such a way that an "interdigit" structure is formed. By this structure a meander channel is formed which considerably enhances the reaction volume.

26. (previously presented) The method of fabrication according to claim 25 wherein the etching is performed by deep anodic or photo-anodic etching.

27. (currently amended) The method of fabrication according to claim 25 wherein the etching is performed by a plasma etching process following a photolithographic process.

28. (previously presented) The method of fabrication according to claim 25, wherein additional alignment marks are advantageously provided for on each of the layer elements.

29. (previously presented) The method of fabrication according to claim 25, wherein at least one surface is pre-structured by a photolithographic process.

30. (currently amended) The method of fabrication according to claim 25, wherein the inner surfaces of the etched cavities are coated by a metallic layer serving as support structure for the catalytic active material.

31. (previously presented) The method of fabrication according to claim 25, wherein the ~~surfaces~~ inner walls of the etched cavities are supplied with a catalytic active layer.

32. (currently amended) A catalytic reactor with a housing including feed and output gas lines for the incoming gas which typically consist of hydrocarbons and water and which we refer to as reactants and a catalyst body inside, wherein the catalytic reactor has a catalyst body with one or more layer elements with cavities which are etched and through which streamable media can flow, ~~such as pores or channels~~ wherein the cavities ~~are~~ run perpendicular to the surface of the body.

33. (previously presented) The catalytic reactor according to claim 33 wherein the catalytic reactor is divided into several segments each segment consisting of the said ~~described~~ catalyst body.

34. (currently amended) A fuel cell system with a catalytic reactor serving as a reformer and a fuel cell, wherein [[a]] the fuel cell has a catalytic reactor according to claims 32 or 33 ~~with a housing including feed and output gas lines for the reactants and a catalyst body inside thereby defined that it has a catalyst body with one or more layer elements with cavities which are etched and through which streamable media can flow, such as pores or channels wherein the cavities are basically perpendicular to the surface~~.

35. (new) The method of fabrication according to claim 25, wherein the porosity or degree of perforation, i.e. ratio of the cross-sectional area of etched to unetched material of the body, is controlled by the fabrication process and can be adjusted over a wide range.